Amendments to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 – 55 (Cancelled)

56. (Previously Presented) An isolated strain of Bifidobacterium UCC 35624 [NCIMB 41003].

57. (Previously Presented) The strain of claim 56 in the form of viable cells.

58. (Previously Presented) The strain of claim 56 in the form of non-viable cells.

59. (Previously Presented) A formulation comprising the strain of claim 1.

60. (Previously Presented) The formulation of claim 59 further comprising at least one further strain of Bifidobacterium.

61. (Previously Presented) The formulation of claim 59, further comprising a probiotic material.

62. (Previously Presented) The formulation of claim 59, further comprising a prebiotic material.

63. (Previously Presented) The formulation of claim 59, further comprising a strain of *Lactobacillus salivarius*.

64. (Previously Presented) The formulation of claim 63, wherein the strain of *Lactobacillus salivarius* is in the form of viable cells.

65. (Previously Presented) The formulation of claim 63, wherein the strain of *Lactobacillus salivarius* is in the form of non-viable cells.

66. (Previously Presented) The formulation of claim 63, wherein the strain of *Lactobacillus salivarius* is isolated from a resected and washed human gastrointestinal tract and is significantly immunomodulatory following oral consumption in humans.

67. (Previously Presented) The formulation of claim 66, wherein the strain of *Lactobacillus salivarius* inhibits the growth of Gram positive bacteria, Gram negative bacteria, or both.

68. (Previously Presented) The formulation of claim 67, wherein the strain of *Lactobacillus salivarius* secretes a product having antimicrobial activity into a cell-free supernatant that is produced only by growing cells and is destroyed by proteinase K and pronase E, wherein the inhibition of growth and antimicrobial activity are maintained in the presence of physiological concentrations of human bile and human gastric juice.

69. (Previously Presented) The formulation of claim 63, wherein the strain of *Lactobacillus salivarius* is *Lactobacillus salivarius* strain UCC 118 [NCIMB 40829] or a mutant or a variant thereof.

70. (Previously Presented) The formulation of claim 69, wherein the mutant is a genetically modified mutant.

71. (Previously Presented) The formulation of claim 69, wherein the variant is a naturally occurring variant.

72. (Previously Presented) The formulation of claim 59, further comprising an ingestible carrier.

73. (Previously Presented) The formulation of claim 72, wherein the ingestible carrier is a pharmaceutically acceptable carrier.

74. (Previously Presented) The formulation of claim 73, wherein the pharmaceutically acceptable carrier is in the form of a capsule, a tablet, or a powder.

75. (Previously Presented) The formulation of claim 72, wherein the ingestible carrier is a food product.

76. (Previously Presented) The formulation of claim 75, wherein the food product is acidified milk, a yogurt, a frozen yogurt, a milk powder, a milk concentrate, a cheese spread, a dressing, or a beverage.

77. (Previously Presented) The formulation of claim 59, further comprising a protein, a peptide, a lipid, a carbohydrate, a vitamin, a mineral, or a trace element.

78. (Previously Presented) The formulation of claim 77, wherein the protein or the peptide is rich in glutamine, glutamate, or both.

79. (Previously Presented) The formulation of claim 59, wherein the *Bifidobacterium* is present at more than 10^6 cfu per gram of the formulation.

80. (Previously Presented) The formulation of claim 59, further comprising an adjuvant.

81. (Previously Presented) The formulation of claim 59, further comprising a bacterial component.

82. (Previously Presented) The formulation of claim 59, further comprising a drug entity.

83. (Previously Presented) The formulation of claim 59, further comprising a biological compound.

84. (Previously Presented) The formulation of claim 59, wherein the formulation is suitable for oral administration to a subject.

85. (Previously Presented) A foodstuff comprising the strain of *Bifidobacterium* of claim 56.

86. (Previously Presented) A foodstuff comprising the formulation of claim 59.

87. (Previously Presented) A pharmaceutical composition comprising the *Bifidobacterium* strain of claim 56 and a pharmaceutically acceptable carrier.

88. (Previously Presented) A pharmaceutical composition comprising the formulation of claim 59 and a pharmaceutically acceptable carrier.

89. (Previously Presented) A mutant of the strain of claim 56 which mutant is significantly immunomodulatory following oral consumption in humans.

90. (Previously Presented) A mutant as claimed in claim 89 wherein the mutant is a genetically modified mutant.

91. (Previously Presented) A variant of the strain of claim 56, which variant is significantly immunomodulatory following oral consumption in humans.

92. (Previously Presented) The variant of claim 91 wherein the variant is a naturally occurring variant.

93. (Previously Presented) A strain of *Bifidobacterium* isolated from resected and washed human gastrointestinal tract which is significantly immunomodulatory following oral consumption in humans as evidenced by decreasing expression of

TNFα or IL-8 when measured in a system comprising cells which interact with the immune system and cells of the immune system.

94. (Previously Presented) The strain of claim 93 wherein the cells which interact with the immune system are epithelial cells.

95. (Previously Presented) The strain of claim 93 wherein the cells which interact with the immune system and the immune system cells are of matched origin.

96. (Previously Presented) The strain of claim 93 wherein the cells which interact with the immune system are of gastrointestinal, respiratory or genitourinary origin.

97. (Previously Presented) The strain of *Bifidobacterium* of claim 93 wherein the cells of the immune system are of gastrointestinal, respiratory or genitourinary origin.

98. (Previously Presented) The strain of claim 93 wherein the strain is a strain of *Bifidobacterium longum.*

99. (Previously Presented) The strain of claim 93 which has significant anti-inflammatory effect following oral consumption in humans.

100. (Previously Presented) The strain of claim 93 which has inhibitory activity against a broad range of Gram positive and Gram negative bacteria.

101. (Previously Presented) The strain of claim 93 wherein the strain exhibits a broad-spectrum of activity against bacteria including *Staphylococcus, Pseudomonas, Coliform* and *Bacillus* species.

102. (Previously Presented) A strain of *Bifidobacterium* isolated from resected and washed human gastrointestinal tract which is capable of combating the effects of inflammatory bowel disease, as measured by measuring a reversal of a wasting

disease induced in severe combined immunodeficient recipient mice (SCID) which have been administered purified $CD4^+$, $CD45RB^{high}$ T cells.

103. (Previously Presented) The strain of *Bifidobacterium* of claim 93, wherein the strain is in the form of viable cells.

104. (Previously Presented) The strain of *Bifidobacterium* of claim 93, wherein the strain is in the form of non-viable cells.

105. (Previously Presented) A formulation comprising the strain of *Bifidobacterium* of claim 93.

106. (Previously Presented) The formulation of claim 105, which comprises two or more strains of *Bifidobacterium.*

107. (Previously Presented) The formulation of claim 105, further comprising a probiotic material.

108. (Previously Presented) The formulation of claim 105, further comprising a prebiotic material.

109. (Previously Presented) The formulation of claim 105, further comprising a strain of *Lactobacillus salivarius.*

110. (Previously Presented) The formulation of claim 109, wherein the strain of *Lactobacillus salivarius* is in the form of viable cells.

111. (Previously Presented) The formulation of claim 109, wherein the strain of *Lactobacillus salivarius* is in the form of non-viable cells.

112. (Previously Presented) The formulation of claim 109, wherein the strain of *Lactobacillus salivarius* is isolated from a resected and washed human

gastrointestinal tract and is significantly immunomodulatory following oral consumption in humans.

113. (Previously Presented) The formulation of claim 112, wherein the strain of *Lactobacillus salivarius* inhibits the growth of Gram positive bacteria, Gram negative bacteria, or both.

114. (Previously Presented) The formulation of claim 113, wherein the strain of *Lactobacillus salivarius* secretes a product having antimicrobial activity into a cell-free supernatant that is produced only by growing cells and is destroyed by proteinase K and pronase E, wherein the inhibition of growth and antimicrobial activity are maintained in the presence of physiological concentrations of human bile and human gastric juice.

115. (Previously Presented) The formulation of claim 109, wherein the strain of *Lactobacillus salivarius* is *Lactobacillus salivarius* strain UCC 118 [NCIMB 40829] or a mutant or a variant thereof.

116. (Previously Presented) The formulation of claim 115, wherein the mutant is a genetically modified mutant.

117. (Previously Presented) The formulation of claim 115, wherein the variant is a naturally occurring variant.

118. (Previously Presented) The formulation of claim 105, further comprising an ingestible carrier.

119. (Previously Presented) The formulation of claim 118, wherein the ingestible carrier is a pharmaceutically acceptable carrier.

120. (Previously Presented) The formulation of claim 119, wherein the pharmaceutically acceptable carrier is in the form of a capsule, a tablet, or a powder.

121. (Previously Presented) The formulation of claim 118, wherein the ingestible carrier is a food product.

122. (Previously Presented) The formulation of claim 121, wherein the food product is acidified milk, a yogurt, a frozen yogurt, a milk powder, a milk concentrate, a cheese spread, a dressing, or a beverage.

123. (Previously Presented) The formulation of claim 105, further comprising a protein, a peptide, a lipid, a carbohydrate, a vitamin, a mineral, or a trace element.

124. (Previously Presented) The formulation of claim 123, wherein the protein or the peptide is rich in glutamine, glutamate, or both.

125. (Previously Presented) The formulation of claim 105, wherein the *Bifidobacterium* is present at more than 10^6 cfu per gram of the formulation.

126. (Previously Presented) The formulation of claim 105, further comprising an adjuvant.

127. (Previously Presented) The formulation of claim 105, further comprising a bacterial component.

128. (Previously Presented) The formulation of claim 105, further comprising a drug entity.

129. (Previously Presented) The formulation of claim 105, further comprising a biological compound.

130. (Previously Presented) The formulation of claim 105, wherein the formulation is suitable for oral administration to a subject.

131. (Previously Presented) A foodstuff comprising the strain of *Bifidobacterium* of claim 93.

132. (Previously Presented) A foodstuff comprising the formulation of claim 105.

133. (Previously Presented) A pharmaceutical composition comprising the *Bifidobacterium* strain of claim 93 and a pharmaceutically acceptable carrier.

134. (Previously Presented) A pharmaceutical composition comprising the formulation of claim 105 and a pharmaceutically acceptable carrier.